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United States Patent [19]

Henningfield et al.

[11] **Patent Number:** **5,221,668**[45] **Date of Patent:** **Jun. 22, 1993**[54] **NUTRITIONAL PRODUCT FOR TRAUMA
AND SURGERY PATIENTS**[75] **Inventors:** **Mary F. Henningfield**, Columbus;
John W. McEwen, Hilliard; **Robert**
H. Miller, Worthington, all of Ohio[73] **Assignee:** **Abbott Laboratories**, Abbott Park,
Ill.[21] **Appl. No.:** **840,972**[22] **Filed:** **Feb. 26, 1992**[51] **Int. Cl.⁵** **A61K 31/195**; A61K 37/02[52] **U.S. Cl.** **514/23**; 424/439;
424/442; 426/601; 426/606; 426/607; 426/656;
426/658; 426/800; 426/801; 426/810; 514/2;
514/878; 514/909; 514/911; 514/921[58] **Field of Search** 514/2, 23, 878, 909,
514/911, 921; 424/439, 442; 426/601, 606, 607,
656, 658, 800, 801, 810[56] **References Cited****U.S. PATENT DOCUMENTS**

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Ross Laboratories, 1986.*Primary Examiner*—Ronald W. Griffin*Attorney, Agent, or Firm*—Lonnie R. Drayer; Donald O.
Nickey[57] **ABSTRACT**

A liquid nutritional product for trauma and surgery patients has a caloric density of about 1.2 to 1.5 Kcal/mL and a calorie to nitrogen ratio of about 112:1 to 145:1. A portion of the protein system comprises partially digested protein, and supplemental L-arginine provides about 1–3% of the total calories in the product. The lipid system has a ratio of linoleic acid to alpha linoleic acid in the range of about 3.5:1 to about 5.5:1.

26 Claims, No Drawings